

Patent claims

1. A medical tool for dental treatments by means of a laser, whose light guide (18, 19) runs in a handpiece (17.1 to 17.4), the light guide (18) being assigned a laser module (2) with power circuitry, characterized in that the first laser module (2) is assigned a second laser module (3) having a different wavelength.

2. The tool as claimed in claim 1, characterized in that one laser module (2) is a short-wavelength laser, in particular a diode laser.

3. The tool as claimed in claim 2, characterized in that the laser has a wavelength of 750 to 1100 nm and a power of 1 to 10 W.

4. The tool as claimed in at least one of claims 1 through 3, characterized in that the second laser module (3) is a long-wavelength laser, in particular an erbium:YAG laser.

5. The tool as claimed in claim 4, characterized in that the laser has a wavelength of 2500 to 3500 nm.

6. The tool as claimed in at least one of claims 1 through 5, characterized in that both laser modules (2, 3) are assigned to the same light guide.

7. The tool as claimed in at least one of claims 1 through 5, characterized in that each laser module (2, 3)

is assigned its own light guide (18, 19), both light guides (18, 19) running through the handpiece (17.1 to 17.4).

8. The tool as claimed in at least one of claims 1 through 5, characterized in that each laser module (2, 3) is assigned its own light guide (18, 19) and its own handpiece (17.1 - 17.4).

9. The tool as claimed in claim 7 or 8, characterized in that the first laser module (2) is assigned glass fibers as light guide.

10. The tool as claimed in claims 7 through 9, characterized in that the second laser module (3) is assigned a hollow waveguide (12) as light guide.

11. The tool as claimed in claim 10, characterized in that an optical element (9) comprising at least two lenses (10.1, 10.2) is coupled into the light guide or into a connection line (8) of the first laser module (2).

12. The tool as claimed in at least one of claims 1 through 11, characterized in that a line (20) for a coolant is provided in the handpiece (17.2, 17.3).

13. The tool as claimed in at least one of claims 1 through 12, characterized in that the handpiece (17.1 to 17.4) is connected to a rear part (7) in a releasable manner.

14. The tool as claimed in claim 13, characterized in that the rear part (7) contains the optical element (9) with the two lenses (10.1, 10.2), the hollow waveguide (12),

a line (14) for coolant, and switch elements (16) for the lasers and the coolant.

15. The tool as claimed in at least one of claims 1 through 14, characterized in that both laser modules (2, 3) are arranged together with the associated power circuitry and a control module (5) in a housing (1).

16. The tool as claimed in claim 15, characterized in that a display and/or a touch screen is/are provided on the housing (1).

17. The tool as claimed in at least one of claims 13 through 16, characterized in that a rear part (7) is assigned several handpieces (17.1 to 17.4) with different light guides and/or coolant line combinations.